

Center for Advanced Combustion Engineering Research

Distinguished Center

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Established as a center in 1986 as a joint project between BYU and the U of U. This center is working towards the clean and efficient use of low-grade fossil fuels. Near term emphasis is on the development of advanced combustion technology that will take advantage of alternative low-cost fuel resources such as coal, heavy oil, oil shale and tar sands. All of these fuel sources are abundant in Utah. Received "Distinguished Center" status in 1991.

| <u>Overview</u> | <u>Technologies</u> | <u>Status</u> | <u>Economic Impact</u> |
|---------------------------|-----------------------------|---|--|
| Current State Contract | \$100,000 | *Combustion process strategies | *Center recognized as a leading world combustion research center |
| Matching Funds Cumulative | \$2,768,514 \$14,737,751 | *Fuel structure reaction mechanisms | *Focus on national status as consortium of excellence in combustion |
| Industry Jobs Created | 39 | *Fuel minerals | *Continue to host national and international meetings & guest speakers |
| Center Related Jobs | 138 | *Mechanisms for pollutant formation and control | *True collaboration between universities |
| Benefiting Utah Companies | | *Reacting, turbulent flows | |
| Center Spin-offs | 1 | *Comprehensive model development | |
| Patents Applied | - | *ACERC 3-dimensional computer simulation of combustion process code (computer-aided design combustion technology) | |
| Patents Issued | -- | | |
| License Agreements | 20 | | |

*\$13.4 million grant from National Science Foundation from 1989-1994

*Annual budget of \$1,108,545 indirect grants and stipends from industry

*\$3,083,365 in supporting contracts

*New spin-off company: Reaction Engineering International

*Annual direct and supported research within the state is \$4-5 million per year

*138 university related jobs funded